

10/593735

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 October 2005 (13.10.2005)

PCT

(10) International Publication Number  
WO 2005/095133 A1

(51) International Patent Classification<sup>7</sup>: B60G 17/015, B60K 31/00, B60T 8/00, B62D 6/00

(21) International Application Number:  
PCT/US2005/010014

(22) International Filing Date: 23 March 2005 (23.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/555,480 23 March 2004 (23.03.2004) US

(71) Applicant (for all designated States except US):  
KELSEY-HAYES COMPANY [US/US]; 12000 Tech Center Drive, Livonia, MI 48150 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): MILOT, Danny, R. [US/US]; 2366 Hickory Point Drive, Ann Arbor, MI 48105 (US).

(74) Agent: SHAH, Shital, A.; MacMillan Sobanski & Todd LLC, One Maritime Plaza, 4th Floor, 720 Water Street, Toledo, OH 43604 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

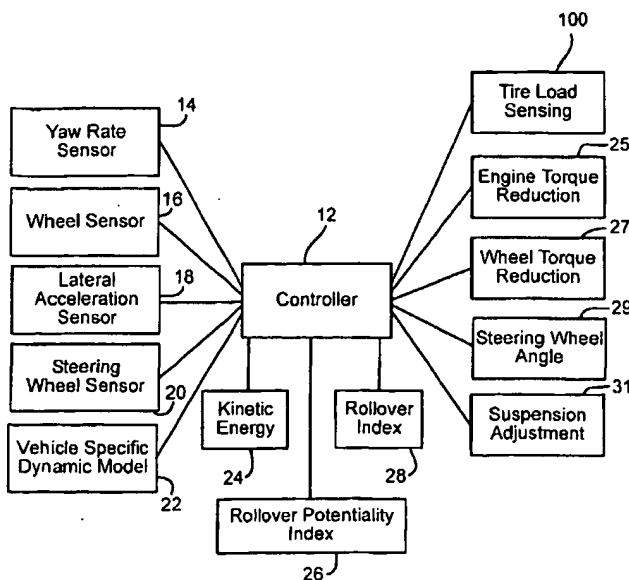
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR VEHICLE ROLLOVER MITIGATION



(57) Abstract: A method is provided for detecting a rollover event of a vehicle. A lateral kinetic energy of the vehicle is determined in response to vehicle longitudinal velocity and vehicle side slip angle. A lateral acceleration of the vehicle is measured. A tire normal force is measured. A rollover potentiality index is determined in response to the lateral kinetic energy and the lateral acceleration. A rollover index is determined by weighting the rollover potentiality index by a factor of the lateral acceleration and by a factor of the tire normal force. A comparison is made to determine if the rollover index is above a predetermined threshold.

WO 2005/095133 A1



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*